

Chapter 10

Coverage of work-related traumatic deaths by OHS and compensation agencies

10.1 INTRODUCTION

Official State, Territory and Commonwealth occupational health and safety (OHS) and workers' compensation ("compensation") agencies are the main sources of statistics on OHS in Australia. In Australia and many western countries, most government-funded prevention activities are based on information from these agencies. Many other individuals and groups in the OHS community, such as insurance institutions, researchers, educators, employers and unions, also rely on this information to inform their activities. If prevention activity is to be appropriately planned and evaluated, it is important that the overall coverage, and the coverage of particular sub-groups of workers or incident types, by these agencies are known. However, the completeness of coverage by these agencies of fatalities relating to work is not well known. In Australia, there is no reliable information on this. Information from other countries, largely based on comparing data from multiple but incomplete data sources, suggests that official statistics on work-related traumatic death provide a significant underestimate of the true number of work-related traumatic deaths^{34, 112, 211, 222, 223, 299-301}. The situation is as bad, or worse, for non-fatal injuries^{70, 302-304}.

This study of work-related fatalities in Australia provided an opportunity to accurately determine the coverage of such deaths by the OHS and compensation agencies. Since coroners investigate all external cause deaths in Australia, the data obtained from coroners' records should, in theory, have included all work-related fatalities that occurred in Australia during the study period. The data could, therefore, be used as a

'gold standard' against which agency data could be measured. Unfortunately, coroner's records currently are poorly accessible and do not always contain details useful for prevention. Therefore, other data sources such as OHS and compensation agencies are commonly used. Also, it should be noted that coroners' records as they currently exist do not always contain the appropriate information to allow deaths to be identified as work-related or not. They are therefore not a perfect gold standard, but are close enough to be considered so for the purposes of the analysis presented here.

The purposes of the analysis described here were to determine overall levels of coverage of work-related traumatic deaths by official OHS and compensation agencies, and to identify which occupations, industries, incident types and demographic groups are well covered, and which areas are less well covered, by official agency data sources.

10.2 APPROACH TO ANALYSIS

All cases included in the study were checked against the information supplied by the OHS and compensation agencies. It was determined for each case whether the death was identified by one or more of the OHS, the compensation and the combined agencies (from Tasmania and the Northern Territory). The data presented in this thesis show the number and proportion of deaths which were identified only from the list of an OHS agency, only from the list of a compensation agency, from lists of both types of agencies, from the list of a combined agency or which were not identified on any of the lists. Analyses describing total OHS agency and total compensation agency list coverage include the combined lists from the Northern Territory and Tasmania, because the lists from these jurisdictions could not be separated into OHS matters and compensation matters. This information is stratified separately by case classification, industry, jurisdiction and mechanism of the fatal incident.

Analyses presented on the basis of jurisdiction cover incidents which **occurred** in the jurisdiction regardless of where the person died or which jurisdiction's agency had the person's name on an OHS, compensation or combined list.

As noted in Section 3.5, there were concerns about the completeness of available compensation information from Western Australia. In addition, matching of the supplied data was made difficult because no names were supplied by the Western Australian agency, leaving a significant proportion of records unable to be confidently matched or excluded. This problem is shown clearly by the fact that the proportion of compensation unit records that were unable to be confidently matched or excluded at a national level was 1.5% (16/2,338) excluding Western Australia, whereas the proportion for the Western Australian compensation list was 13.3% (21/158) (Table 3.5).

Inclusion of Western Australian data therefore presented a problem because the use of significantly incomplete data would suggest an erroneously low coverage of work-related deaths in Western Australia by the Western Australian compensation agency, and thus also produce erroneously low figures for coverage at a national level.

In addition to these problems with Western Australian compensation data, no data were available from the Australian Capital Territory. Therefore, the data presented in this thesis regarding national coverage by OHS and compensation agencies exclude all incidents that occurred in either Western Australia or the Australian Capital Territory. However, coverage by Western Australian agencies for incidents that occurred elsewhere is included (there were two such cases with the Western Australian

compensation agency – see Table 10.7). Also, as noted in Section 3.5, compensation data were not available from Telstra or the defence forces. Since the names of a small number of persons from the communication and defence force industries were on the compensation lists, the industries have been included in the relevant Figures and Tables in this Chapter. However, compensation information for the communication and defence industry sectors should be interpreted with caution.

Sections 10.3 and 10.4 consider all deaths included as cases. The results in Sections 10.5 – 10.7 consider only working deaths (workplace and work-road).

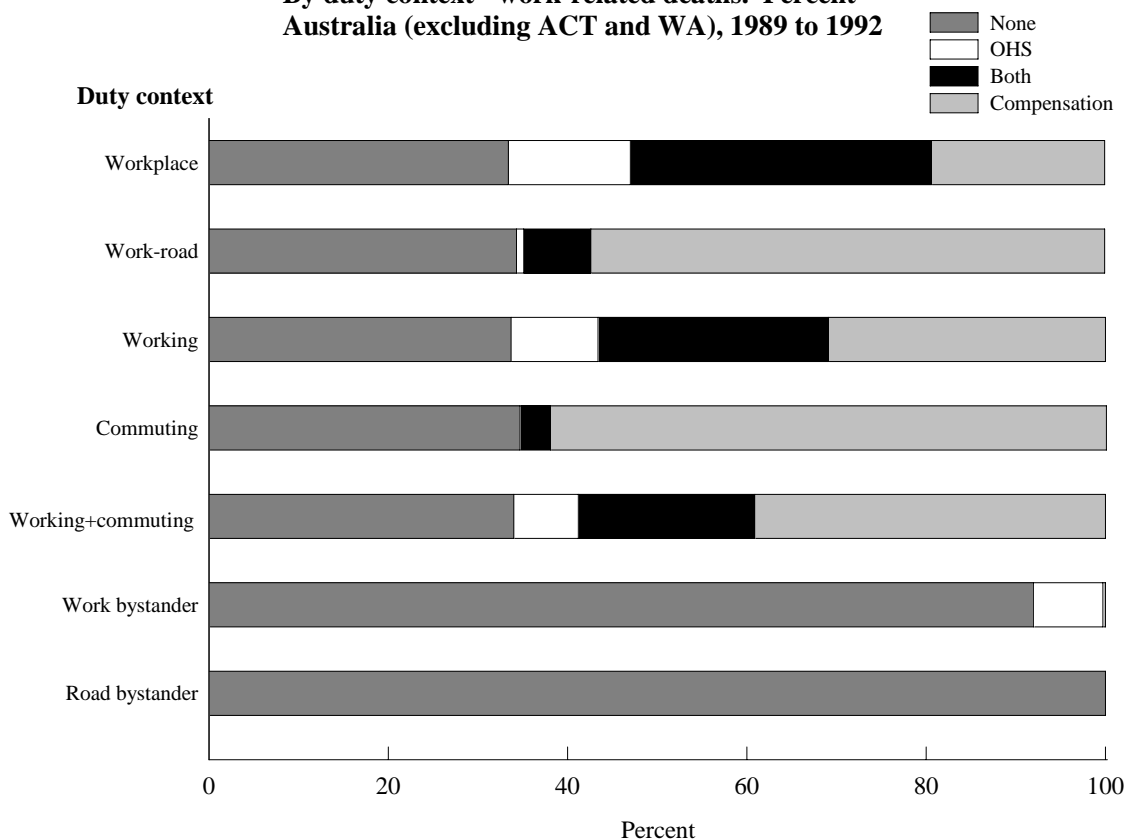
Note that “coverage” as used in this chapter and other related areas of the thesis refers to whether the agency had identified the death as being work-related, rather than to whether the death was in theory within the agency’s charter or legislative requirements.

10.3 OVERALL COVERAGE

This section primarily considers only aggregated national results, but the main patterns were similar in all jurisdictions. The overall percentage of working deaths (workplace and work-road) covered by at least one of the agencies was 66%. Conversely, 34% of working deaths were **not** covered by any agency. Only 35% of working deaths were covered by an OHS or combined agency, while 57% were covered by a compensation or combined agency. The OHS agencies had minimal coverage of work-road and commuting deaths, whereas the compensation system covered these deaths better than the workplace category (Figure 10.1 and Table 10.1). Looking at all work-related deaths of workers (including commuting) the picture was much the same, with coverage by at least one agency of 66%.

Almost one quarter of volunteers were covered by at least one of the agency types (most of these volunteers being volunteer firefighters). There was minimal coverage of any of the other categories by any of the agencies. This low coverage is not surprising for the volunteer, student, home duties and non-farm rural deaths, although, interestingly, there was at least some coverage of the first three of these categories. However, the poor coverage of bystander deaths, whether in the workplace (8%) or on the road (0%), was clear.

**Figure 10.1 Coverage of deaths by OHS and compensation agencies
By duty context - work-related deaths. Percent
Australia (excluding ACT and WA), 1989 to 1992**



10.4 JURISDICTION

There was considerable variation in coverage between jurisdictions, with between 25% (in Victoria) and 41% (in Queensland and Tasmania) of working deaths **not** being

covered by any agency. The coverage of working deaths by OHS systems was variable between jurisdictions, but generally low. Excluding the Northern Territory and Tasmania, which did not have separate OHS and compensation agencies, the coverage ranged from 20% in Queensland to 43% in Victoria. Lower percentages but a similar pattern were seen for working and commuting deaths combined. The compensation systems had a much higher coverage of working and commuting deaths in all jurisdictions, ranging from 46% in South Australia to 65% in Victoria for working deaths, and from 50% in New South Wales to 70% in Victoria for working and commuting deaths combined (Figure 10.2 and Table 10.2).

Figure 10.2 Jurisdictional coverage of deaths by OHS and compensation agencies
Working deaths. Percent. Australia (excluding ACT and WA), 1989 to 1992

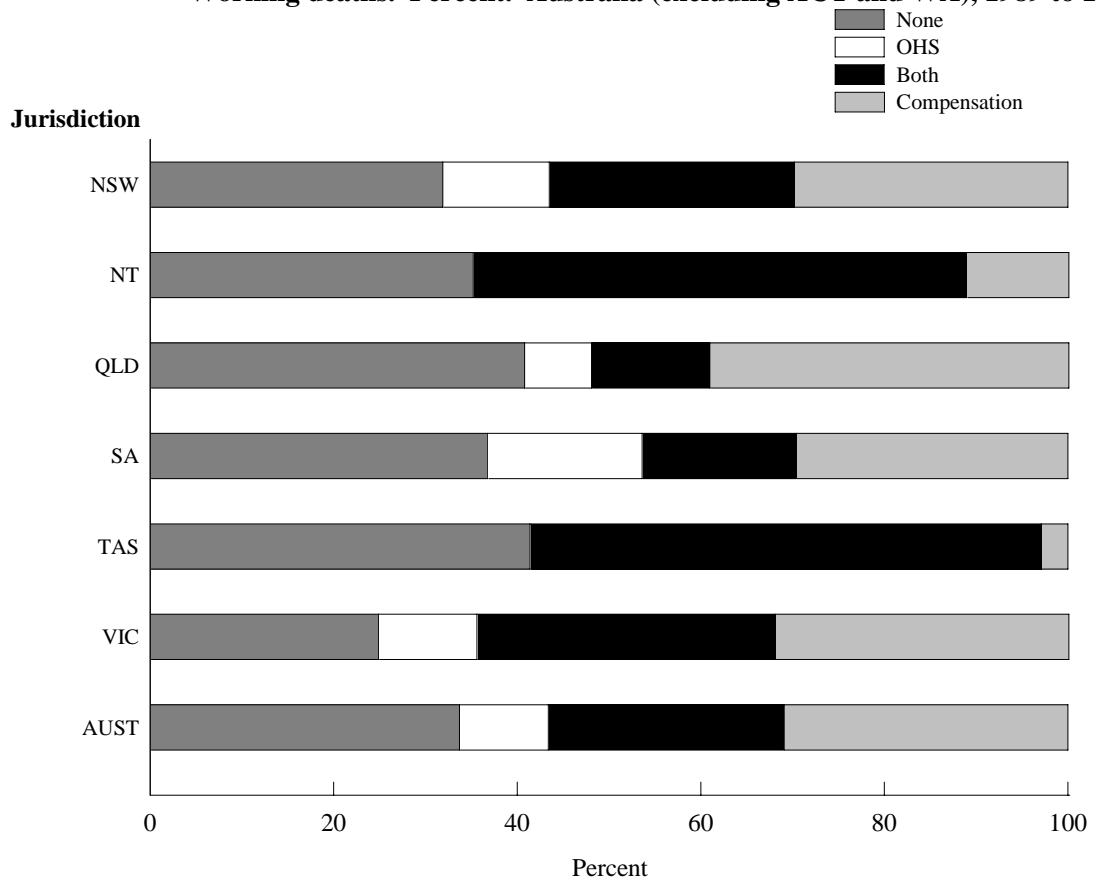


Table 10.1 Coverage of deaths by OHS and compensation agencies for each study category (excluding ACT and WA). Percent¹. Australia, 1989 to 1992

Work category	OHS ²	Compo ³	Both ⁴	Comb ⁵	None ⁶	Number ⁷	OHS + Comp total ⁸	OHS total ⁹	Comp total ¹⁰
Workplace	13.6	19.3	28.3	5.3	33.4	1,107	66.6	47.2	52.9
Work-road	0.8	57.3	5.7	1.8	34.3	487	65.7	8.4	64.9
All working	9.7	30.9	21.4	4.3	33.7	1,594	66.3	35.4	56.6
Commuting	-	62.0	0.4	3.0	34.7	571	65.3	3.3	65.3
Working + commuting	7.2	39.1	15.8	3.9	34.0	2,165	66.0	26.9	58.9
Bystander (workplace)	7.7	0.3	-	-	92.0	275	8.0	7.7	0.3
Bystander (road)	-	-	-	-	100.0	434	-	-	-
All bystanders	3.1	0.1	-	-	96.7	709	3.3	3.1	0.1
Volunteers	-	11.8	11.8	-	76.5	17	23.5	11.8	23.5
Students	2.8	-	-	-	97.2	36	2.8	2.8	-
Home duties	6.0	-	-	-	94.0	266	6.0	6.0	-
Other – farm	-	-	-	-	100.0	39	-	-	-

1: Percentages are based on the total number in each study category

2: On OHS list only

3: On compensation list only

4: On both OHS and compensation lists

5: On combined OHS/compensation list (NT and TAS)

6: Not on any list

7: Number in study category

8: Total on any OHS, compensation or combined list

9: Total on any OHS list (including combined)

10: Total on any compensation list (including combined)

Table 10.2 Coverage of deaths by OHS and compensation agencies by jurisdiction - working and commuting deaths (excluding ACT and WA). Percent¹. Australia, 1989 to 1992

Jurisdiction	OHS ²	Compo ³	Both ⁴	Comb ⁵	None ⁶	Number ⁷	OHS + Comp total ⁸	OHS total ⁹	Comp total ¹⁰
New South Wales									
Working	11.6	29.8	26.7	-	31.9	580	68.1	38.3	56.6
Working + commuting	9.0	29.0	20.9	-	41.0	741	59.0	30.0	49.9
Northern Territory									
Working	-	11.1	1.9	51.9	35.2	54	64.8	53.7	64.8
Working + commuting	-	9.7	1.6	50.0	38.7	62	61.3	51.6	61.3
Queensland									
Working	7.3	39.1	12.7	0.2	40.8	427	59.2	20.1	52.0
Working + commuting	5.5	50.3	9.8	0.2	34.3	569	65.7	15.5	60.3
South Australia									
Working	16.8	29.6	16.8	-	36.8	125	63.2	33.6	46.4
Working + commuting	11.9	46.0	11.9	-	30.1	176	69.9	23.9	58.0
Tasmania									
Working	-	2.9	-	55.7	41.4	70	58.6	55.7	58.6
Working + commuting	-	2.2	-	58.2	39.6	91	60.4	58.2	60.4
Victoria									
Working	10.7	32.0	32.5	-	24.9	338	75.1	43.2	64.5
Working + commuting	6.8	48.9	20.9	-	23.4	526	76.6	27.8	69.8

1: Percentages are based on the total number in each study category

2: On OHS list only

3: On compensation list only

4: On both OHS and compensation lists

5: On combined OHS/compensation list (NT and TAS)

6: Not on any list

7: Number in study category

8: Total on any OHS, compensation or combined list

9: Total on any OHS list (including combined)

10: Total on any compensation list (including combined)

10.5 INDUSTRY

There was marked variation in coverage between industries, with electricity, gas and water (96%) and manufacturing (89%) covered well, but defence (6%), fishing (19%), communication (33%) and agriculture (50%) relatively poorly covered. The OHS agencies' coverage ranged from 2% (for defence) to 74% (electricity, gas and water). The coverage was less than 20% of deaths for six of the 16 industry groups (notably fishing, mining, communication and defence) and less than 40% of deaths for 11 industries. The compensation agencies' coverage varied from 4% in defence to 91% for electricity, gas and water. Industries not well covered by the compensation agencies included fishing (17%), and agriculture (27%) (Figures 10.3 - 10.5 and Table 10.3).

Figure 10.3 Industries covered by OHS or compensation agencies - working deaths
Percent of each industry group. Australia (excluding ACT and WA), 1989 to 1992

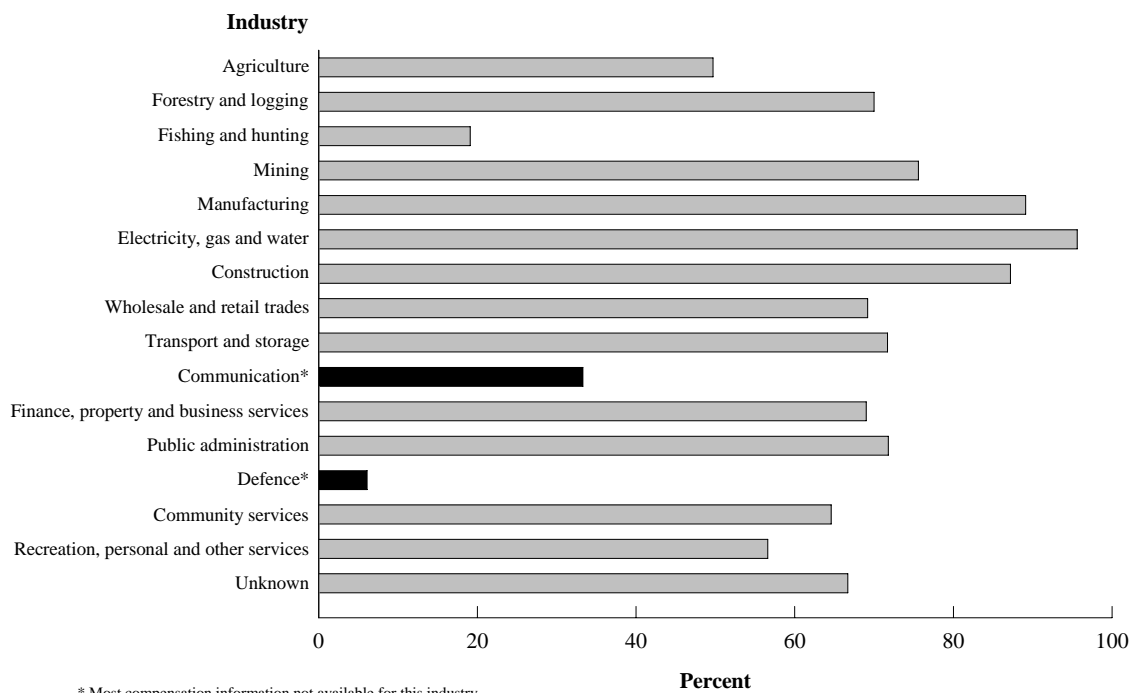


Figure 10.4 Industries covered by OHS agencies - working deaths
Percent of each industry group. Australia (excluding ACT and WA), 1989 to 1992

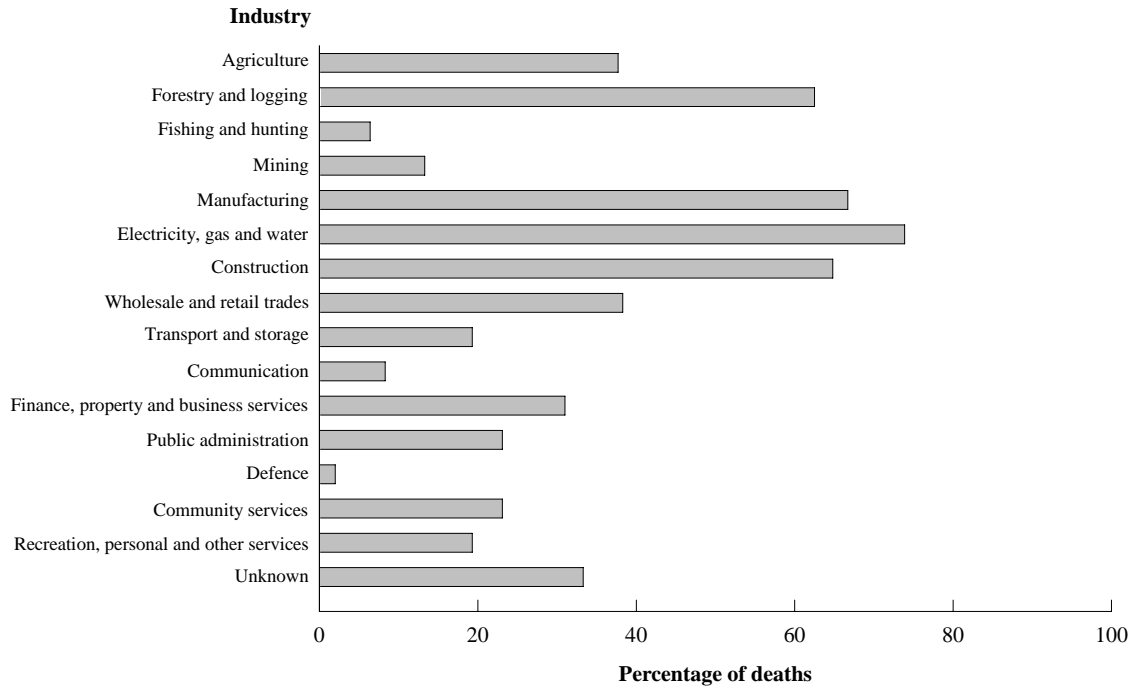
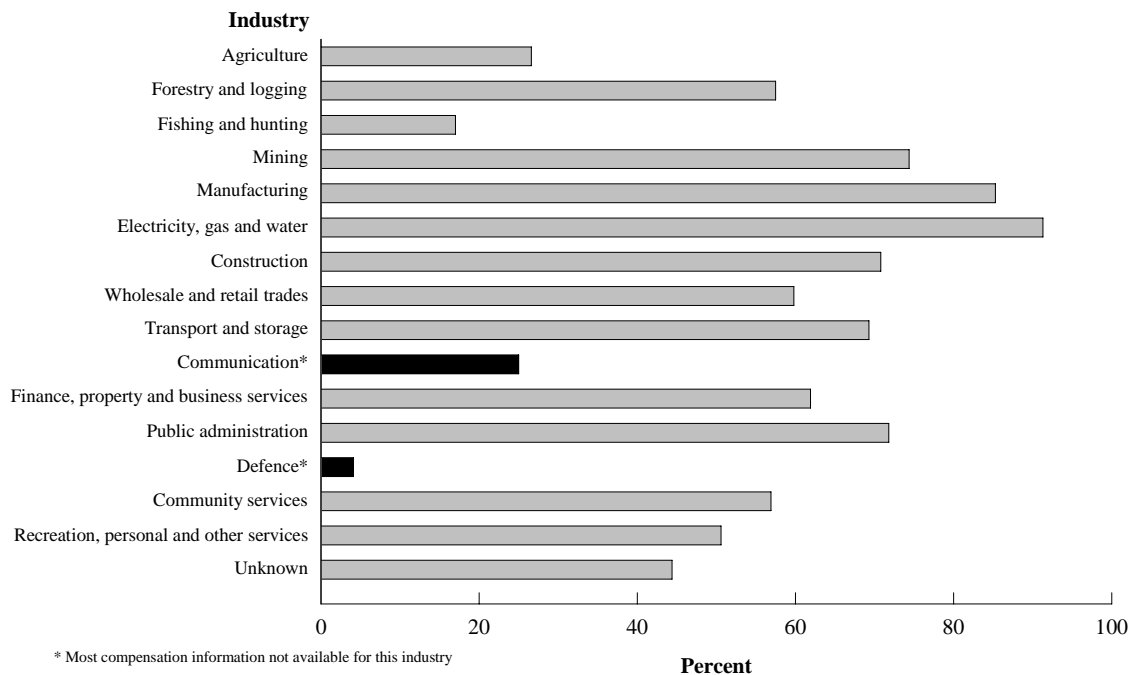


Figure 10.5 Industries covered by compensation agencies - working deaths
Percent of each industry group. Australia (excluding ACT and WA), 1989 to 1992



**Table 10.3 Coverage of working deaths by OHS and compensation agencies by industry (excluding ACT and WA)
Percent¹. Australia, 1989 to 1992**

Industry	OHS ²	Comp ³	Both ⁴	Comb ⁵	None ⁶	Number ⁷	OHS + Comp total ⁸	OHS total ⁹	Comp total ¹⁰
Agriculture	23.1	12.0	10.4	4.2	50.3	308	49.7	37.7	26.6
Forestry and logging	12.5	7.5	27.5	22.5	30.0	40	70.0	62.5	57.5
Fishing and hunting	2.1	12.8	4.3	-	80.9	47	19.1	6.4	17.0
Mining	1.1	62.2	4.4	7.8	24.4	90	75.6	13.3	74.4
Manufacturing	3.9	22.5	56.6	6.2	10.9	129	89.1	66.7	85.3
Electricity, gas and water	4.4	21.7	65.2	4.4	4.4	23	95.6	73.9	91.3
Construction	16.4	22.4	43.4	5.0	12.8	219	87.2	64.8	70.8
Wholesale and retail trades	9.4	30.8	24.3	4.7	30.8	107	69.2	38.3	59.8
Transport and storage	2.4	52.4	14.2	2.7	28.3	332	71.7	19.3	69.3
Communication ¹¹	8.3	25.0	-	-	66.7	12	33.3	8.3	25.0
Finance, property and business services	7.1	38.1	23.8	-	31.0	42	69.0	31.0	61.9
Public administration	-	48.7	18.0	5.1	28.2	39	71.8	23.1	71.8
Defence ¹¹	2.0	4.1	-	-	93.9	49	6.1	2.0	4.1
Community services	7.7	41.5	13.9	1.5	35.4	65	64.6	23.1	56.9
Recreation, personal and other services	6.0	37.4	10.8	2.4	43.4	83	56.6	19.3	50.6
Not Known	22.2	33.3	11.1	-	33.3	9	66.7	33.3	44.4
Total	9.7	30.9	21.4	4.3	33.7	1,594	66.3	35.4	56.6

1: Percentages are based on the total number in each industry category.

2: On OHS list only.

3: On compensation list only.

4: On both OHS and compensation lists.

5: On combined OHS/compensation list (NT and TAS).

6: Not on any list.

7: Number in study category.

8: Total on any OHS, compensation or combined list.

9: Total on any OHS list (including combined).

10: Total on any compensation list (including combined).

11: Most compensation information not available for this industry.

10.6 OCCUPATION

Coverage of occupation groups was best for tradespersons (83%) and worst for managers and administrators (44%). Apart from tradespersons (63%) and labourers and related workers (46%), the OHS agencies covered a third or less of the deaths in each occupation group. In contrast, coverage by compensation agencies was above 50% for all occupation groups except managers and administrators (22%) (Figures 10.6 - 10.8 and Table 10.4).

Figure 10.6 Occupations covered by OHS or compensation agencies - working deaths
Percent of each occupational group. Australia (excluding ACT and WA), 1989 to 1992

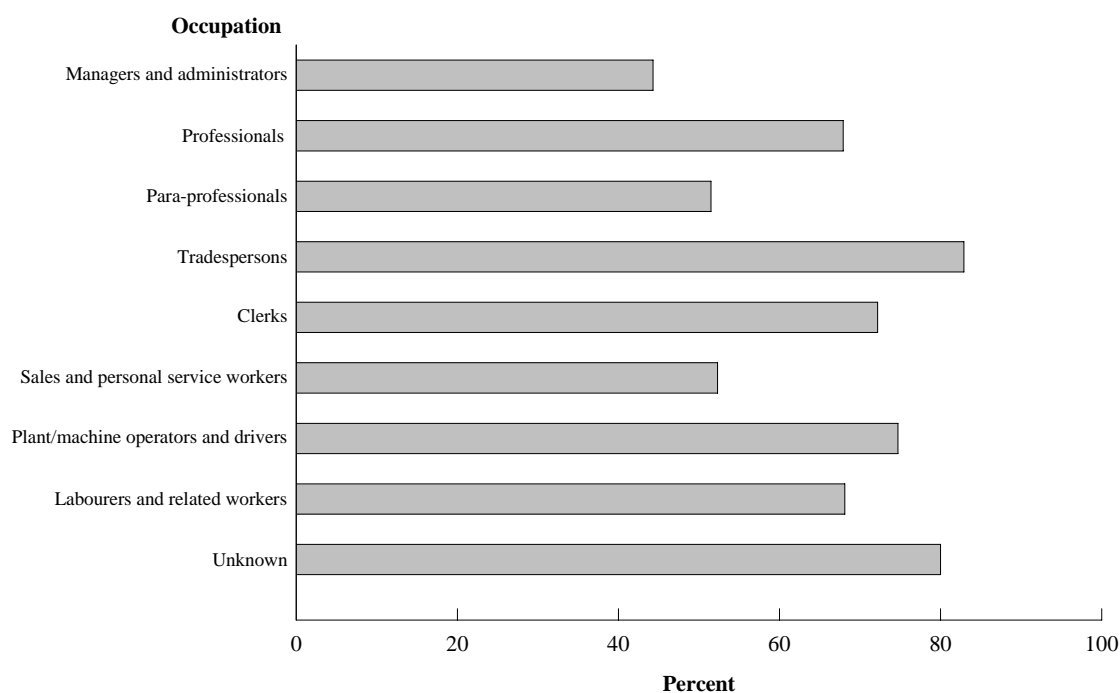


Figure 10.7 Occupations covered by OHS agencies - working deaths
Percent of each occupational group. Australia (excluding ACT and WA), 1989 to 1992

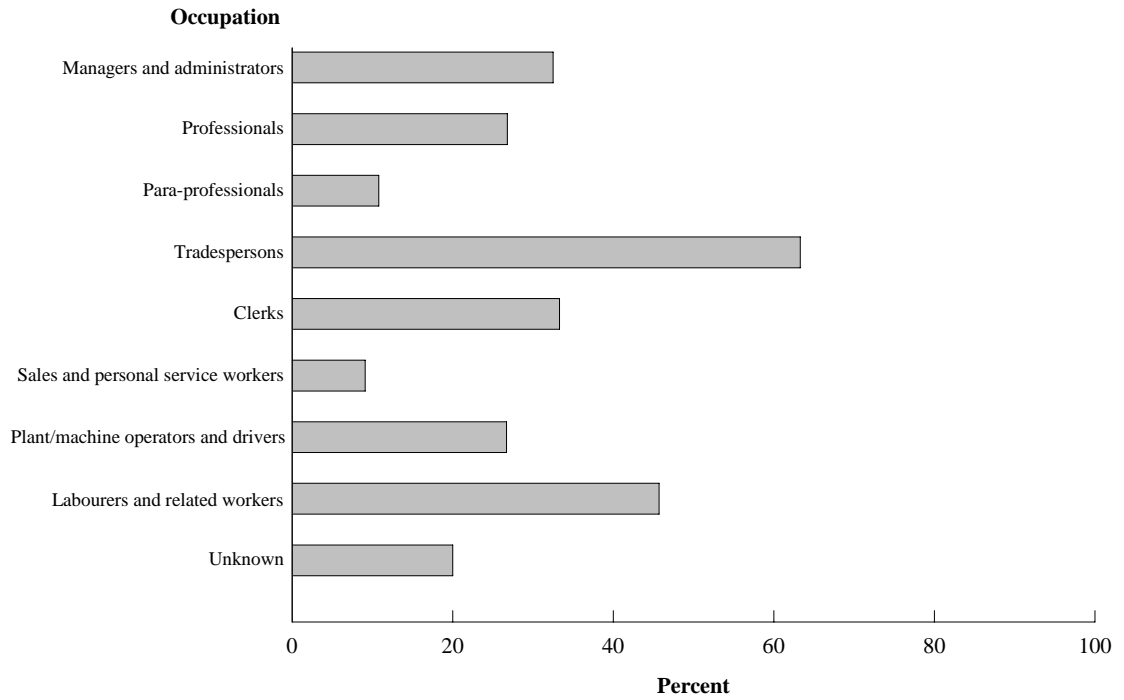
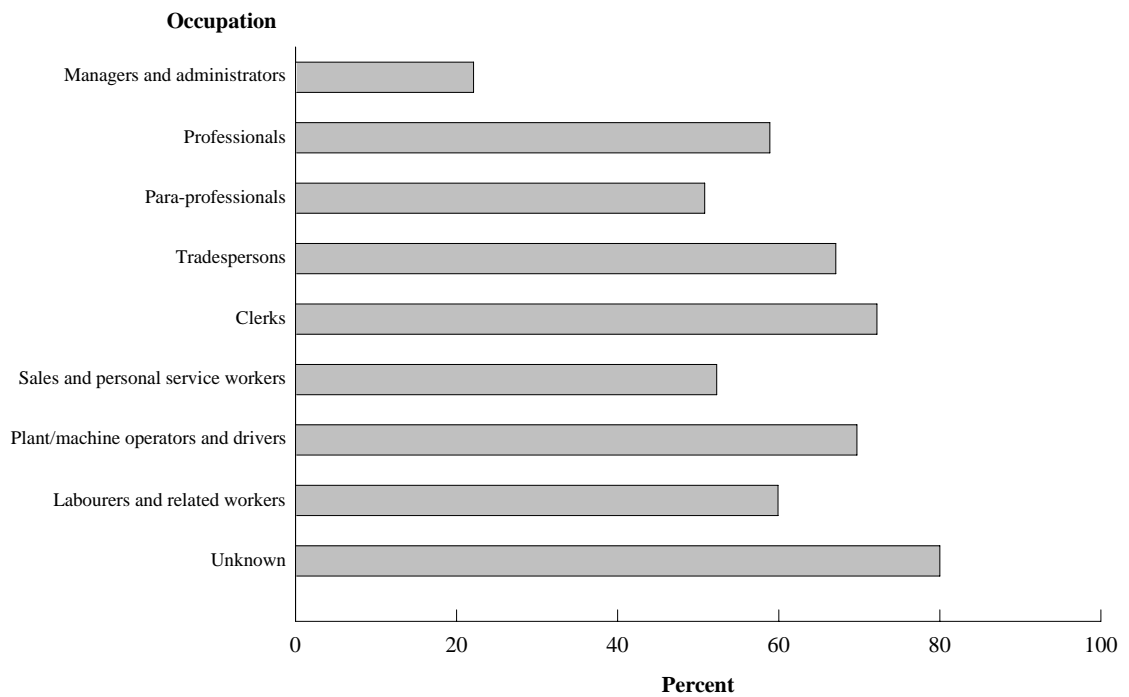


Figure 10.8 Occupations covered by compensation agencies - working deaths
Percent of each occupational group. Australia (excluding ACT and WA), 1989 to 1992



**Table 10.4 Coverage of working deaths by OHS and compensation agencies by occupation (excluding ACT and WA)
Percent¹. Australia, 1989 to 1992**

Occupation	OHS ²	Comp ³	Both ⁴	Comb ⁵	None ⁶	Number ⁷	OHS + Comp total ⁸	OHS total ⁹	Comp total ¹⁰
Managers and administrators	22.1	11.8	7.4	3.0	55.7	271	44.3	32.5	22.1
Professionals	8.9	41.1	16.1	1.8	32.1	56	67.9	26.8	58.9
Para-professionals	0.8	40.8	4.6	5.4	48.5	130	51.5	10.8	50.8
Tradespersons	15.7	19.9	43.1	4.2	17.1	216	82.9	63.0	67.1
Clerks	-	38.9	22.2	11.1	27.8	18	72.2	33.3	72.2
Salespersons and personal service workers	-	43.2	4.6	4.6	47.7	44	52.3	9.1	52.3
Plant/machine operators and drivers	5.1	48.0	18.3	3.4	25.3	475	74.7	26.7	69.7
Labourers and related workers	8.2	22.4	31.4	6.1	31.9	379	68.1	45.7	59.9
Not Known	-	60.0	20.0	-	20.0	5	80.0	20.0	80.0
Total	9.7	30.9	21.4	4.3	33.7	1,594	66.3	35.4	56.6

1: Percentages are based on the total number in each occupation category.

2: On OHS list only.

3: On compensation list only.

4: On both OHS and compensation lists.

5: On combined OHS/compensation list (NT and TAS).

6: Not on any list.

7: Number in study category.

8: Total on any OHS, compensation or combined list.

9: Total on any OHS list (including combined).

10: Total on any compensation list (including combined).

10.7 MECHANISM OF INCIDENT

Coverage of deaths varied markedly depending on the mechanism involved. Deaths resulting from incidents involving slides/cave-ins (100%), being hit by moving objects (81%), rollovers of mobile mechanical equipment (76%), contact with electricity (76%) and falls (75%) were all covered well or reasonably well. There was much lower coverage of deaths arising from incidents involving drowning (26%), hitting objects (50%), weapons (35%) and contact with chemicals or other substances (52%).

Coverage patterns were similar for OHS and compensation agencies, except that coverage was particularly low in the OHS system for motor vehicle incidents (8%), incidents involving weapons (8%) and drowning (11%) (Figures 10.9 - 10.11 and Table 10.5).

Figure 10.9 Mechanism of the fatal incident covered by OHS or compensation agencies - working deaths
Percent of each mechanism group. Australia (excluding ACT and WA), 1989 to 1992

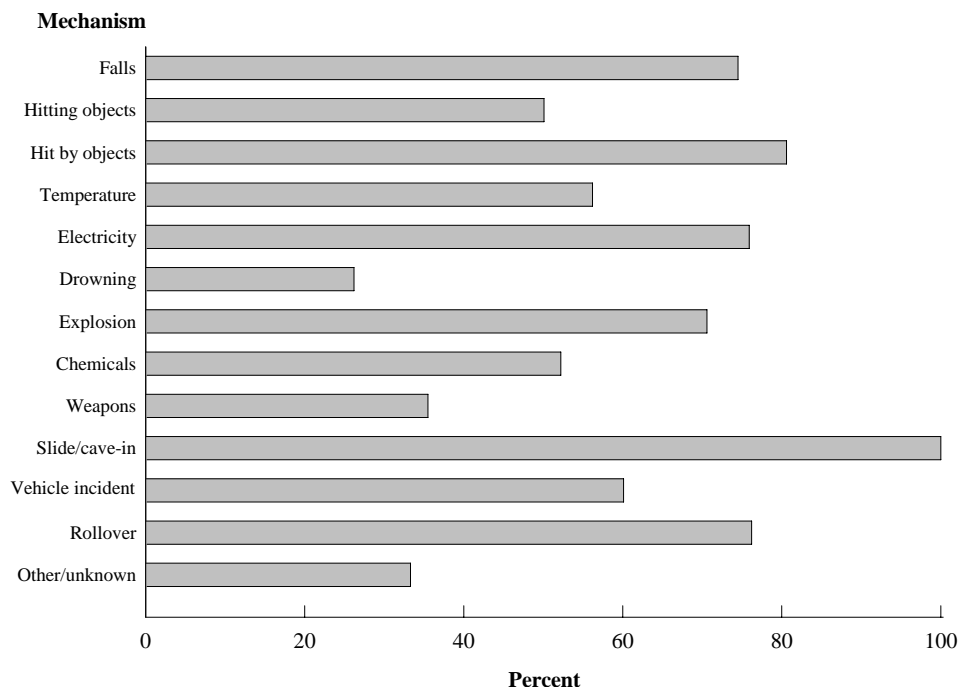


Figure 10.10 Mechanism of the fatal incident covered by OHS agencies - working deaths
Percent of each mechanism group. Australia (excluding ACT and WA), 1989 to 1992

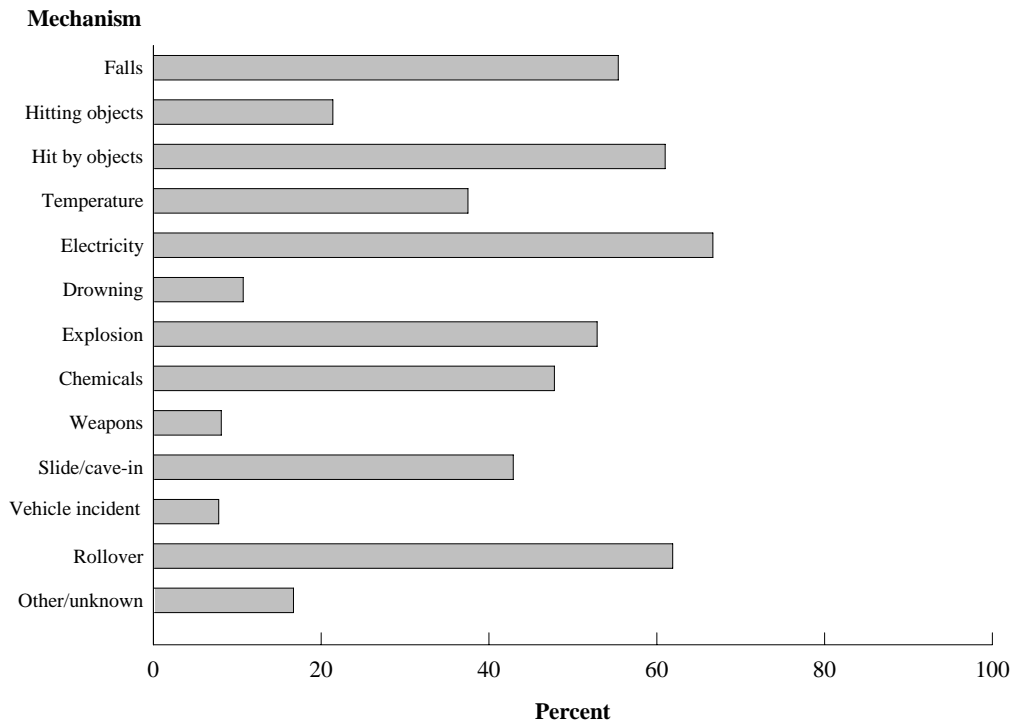


Figure 10.11 Mechanism of the fatal incident covered by compensation agencies - working deaths
Percent of each mechanism group. Australia (excluding ACT and WA), 1989 to 1992

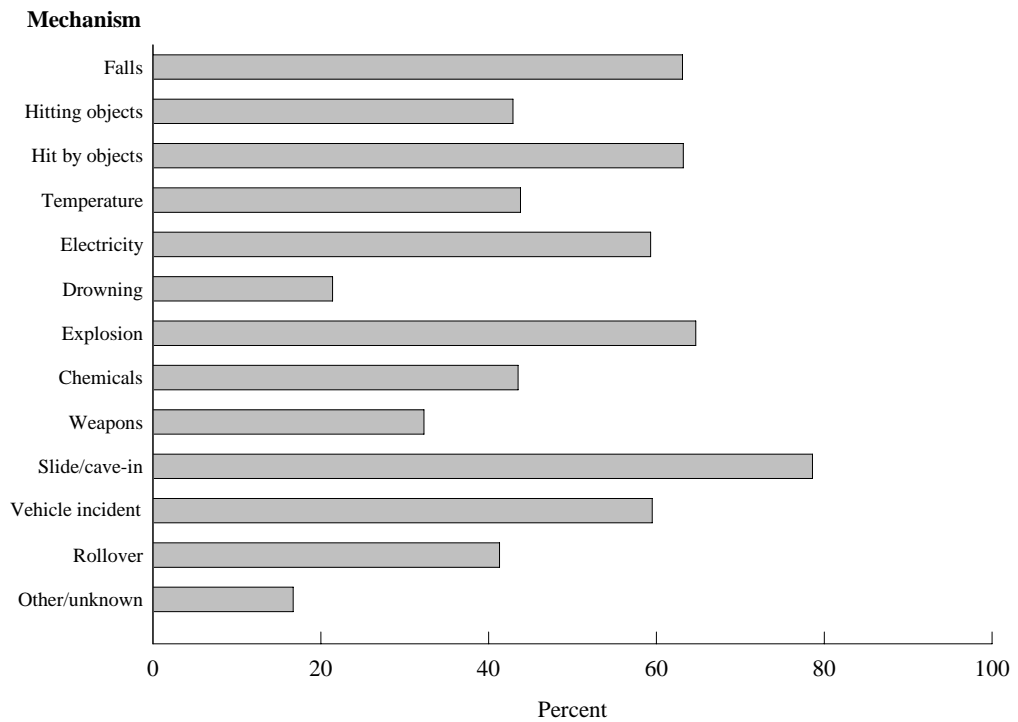


Table 10.5 Coverage of working deaths by OHS and compensation agencies by mechanism of fatal incident (excluding ACT and WA) Percent¹. Australia, 1989 to 1992

Mechanism of fatal incident	OHS ²	Comp ³	Both ⁴	Comb ⁵	None ⁶	Number ⁷	OHS + Comp total ⁸	OHS total ⁹	Comp total ¹⁰
Falls	11.5	19.1	42.7	1.3	25.5	157	74.5	55.4	63.1
Hitting objects	7.1	28.6	14.3	-	50.0	14	50.1	21.4	42.9
Being hit by moving objects	17.4	19.6	36.1	7.5	19.4	443	80.6	61.0	63.2
Contact with heat or cold	12.5	18.8	25.0	-	43.8	16	56.2	37.5	43.8
Contact with electricity	16.7	9.3	45.4	4.6	24.1	108	75.9	66.7	59.3
Drowning	4.8	15.5	6.0	-	73.8	84	26.2	10.7	21.4
Explosion	5.9	17.7	47.1	-	29.4	17	70.6	52.9	64.7
Chemicals, other substances	8.7	4.4	30.4	8.7	47.8	23	52.2	47.8	43.5
Weapons	3.2	27.4	1.6	3.2	64.5	62	35.5	8.1	32.3
Slide/cave in	21.4	57.1	21.4	-	-	14	100.0	42.9	78.6
Vehicle incident	0.7	52.3	4.1	3.1	39.9	587	60.1	7.8	59.5
Rollover	34.9	14.3	17.5	9.5	23.8	63	76.2	61.9	41.3
Other and unknown	16.7	16.7	-	-	66.7	6	33.3	16.7	16.7
Total	9.7	30.9	21.4	4.3	33.7	1,594	66.3	35.4	56.6

1: Percentages are based on the total number in each mechanism category.

2: On OHS list only.

3: On compensation list only.

4: On both OHS and compensation lists.

5: On combined OHS/compensation list (NT and TAS).

6: Not on any list.

7: Number in study category.

8: Total on any OHS, compensation or combined list.

9: Total on any OHS list (including combined).

10: Total on any compensation list (including combined).

10.8 WORKING ARRANGEMENT, AGE AND MARITAL STATUS

When adopting the practical definition of self-employment (see Chapter 9), the coverage by OHS agencies was similar regardless of the working arrangement of the deceased worker. In contrast, the coverage by compensation agencies was considerably higher for employees (74%) than for self-employed persons (20%). Unpaid family helpers had minimal coverage by compensation agencies.

There was no discernible variation in the coverage of OHS agencies on the basis of age or marital status. Widowed persons (24%) and divorced persons (47%) had a lower coverage by compensation agencies than those who were married (58%), separated (57%) or never married (58%). There was a clear trend of decreasing coverage by compensation agencies as the age of the deceased workers increased. Much, but not all, of this decrease appeared to be related to the fact that the older workers were more likely to be self-employed, and the compensation coverage of self-employed persons was much lower than that of employees (Table 10.6).

Table 10.6 Coverage of working deaths by OHS and compensation agencies. By employment status and age (excluding ACT and WA) Percent¹ Australia, 1989 to 1992

Age	OHS total ²					Comp total ³					OHS + Comp total ⁴				
	Empl ⁵	Self ⁶	Family ⁷	Other ⁸	Total ⁹	Empl ⁵	Self ⁶	Family ⁷	Other ⁸	Total ⁹	Empl ⁵	Self ⁶	Family ⁷	Other ⁸	Total ⁹
5-14	50.0	-	22.2	-	25.0	-	-	-	-	-	50.0		22.2	-	25.0
15-24	38.4	26.3	33.3	-	35.3	68.0	10.5	-	50.0	60.5	70.8	26.3	33.3	50.0	65.1
25-34	36.0	35.9	-	3.6	33.8	75.7	23.4	-	64.3	66.9	79.9	50.0	-	67.9	74.4
35-44	35.8	40.6	-	4.4	35.0	74.9	29.7	-	60.8	60.3	78.6	51.5	-	60.9	69.1
45-54	41.1	32.7	-	-	36.3	76.7	15.9	-	50.0	52.3	79.1	37.4	-	50.0	61.9
55-64	46.2	38.4	33.3	-	41.0	75.3	25.6	-	16.7	49.5	81.7	51.2	33.3	17.0	64.9
65-74	25.0	36.6	-	40.0	33.3	56.3	7.3	-	20.0	20.6	68.7	36.6	-	60.0	46.0
75+	-	33.3	-	-	27.3	-	-	-	50.0	4.6	-	33.3	-	50.0	31.8
Total ¹⁰	37.9	36.2	24.0	4.5	35.4	73.4	20.4	-	52.8	56.6	77.3	44.5	24.0	56.2	66.3

1: Percentages are based on the total number in each age-employment status category.

2: Total on any OHS list (including combined).

3: Total on any compensation list (including combined).

4: Total on any OHS, compensation or combined list.

5: Employee (n=1,044).

6: Self-employed (n=436).

7: Unpaid family helper (n=25).

8: Other and unknown (n=89).

9: Total in age category.

10: Total in employment status category.

10.9 DISCUSSION

These findings are not intended primarily to provide an audit of the completeness of coverage of the OHS and compensation agencies against the areas that the systems are designed to cover. Different jurisdictions have different definitions of ‘work-relatedness’, different compensation eligibility criteria and different categories of work-related death in which they are interested. Therefore, individual jurisdictions will be able to use this information to assess their coverage of incidents that they intend or expect to cover. However, problems with coverage do have important implications for the OHS community, since the compensation system currently provides the only regular, national OHS data and the OHS agencies’ information is used to develop and monitor prevention initiatives.

In an ideal world, the OHS agencies should investigate all work-related deaths.

However, this study implies an overall coverage of less than 40% of traumatic deaths of workers. Similar results have been found in the United States (32%)³⁴ and New Zealand (40%)³⁰⁰, although the inclusion criteria were not exactly the same. Much higher coverage was documented in metropolitan Cape Town, in South Africa (72%)²²². This relatively low coverage is of particular concern because it is investigation by the OHS agencies that should provide the detailed information necessary to appropriately target prevention activity. The OHS authorities are the main source of effort in terms of OHS prevention and enforcement activity. Therefore, if it is assumed that this activity is useful in improving the level of OHS, lack of awareness by the authorities of the details of a large proportion of incidents in particular areas is likely to have a negative impact, because priorities may be wrongly assessed.

The results presented here reveal that particular industries, occupations and mechanisms are not well covered by OHS agencies. Low coverage of the defence force incidents is not surprising, since the military covers this area itself. Although this may have practical and administrative advantages for the military, there is the potential to miss the opportunity for constructive OHS responses to fatal incidents if an OHS authority is not involved in the investigation and in consideration of prevention activities. A similar situation exists with the fishing and mining industries, with some of the low coverage by the OHS agencies probably being related to involvement by a marine safety authority or mining inspectorate respectively. As with the defence forces, these non-OHS agency authorities have specialist knowledge and skills which are clearly of importance in the investigation procedure. However, a strong case should be made for having the additional involvement of a non-sectoral agency which can examine incidents from a broader perspective. This has the advantages of them not being as open to influence by accepted industry norms, as well as gaining information that might be relevant to other industry sectors. In addition, it is of concern that the two industries with the highest number of deaths (agriculture and transport) have low coverage by OHS agencies (38% and 19% respectively). Low coverage of rural and transport industries have also been identified in New Zealand³⁰⁰, South Africa^{222, 223} and the United States³⁴. The potential for appropriate prevention activity, or prosecution under OHS legislation when this is warranted, is thus being diminished in two major industry sectors.

There are also some important classes of incidents that are largely neglected by the OHS agencies, with motor vehicle incidents (8%) and incidents involving weapons, mainly assaults (8%), being the two most stark examples. Presumably the investigation in these areas is left to the police, who then take whatever action they deem appropriate.

However, the police are primarily interested in determining who was at fault in an incident and in identifying any breaches of the law. Any consideration of the possible contribution of OHS factors is therefore likely to assume a low profile. Factors such as shift rosters, equipment maintenance, hours of work, security and lighting may be relevant to incidents in one or both of these areas. Yet, if the OHS agencies are not involved in the investigation of such incidents, these factors may not receive due attention.

There was minimal coverage of workplace bystander deaths by OHS agencies (and compensation agencies) and no coverage at all of road bystander deaths. This means that an important area where work is having an adverse (and presumably preventable) effect on the community is not being recognised and is consequently having little specific effort directed at it by the OHS community.

Compensation data, available from State and Territory agencies and the National Data Set²⁰⁴ remain the primary source of OHS information in Australia, even though the system is designed to only cover employees. With the compensation agencies covering 57% of deaths of working persons (or 59% of deaths if commuting is included), this means that about 40% of the traumatic work-related deaths of workers (and virtually all Bystander deaths) are not being reflected in official routine statistics. As for OHS agency coverage, the coverage by compensation agencies in Australia was similar to that found elsewhere – 57% in the United States³⁴ and 63% in New Zealand³⁰⁰. Published compensation information therefore significantly underestimates the magnitude of work-related traumatic death of workers and provides virtually no information on the deaths of non-working persons killed as a result of someone else's work, whether in a workplace or on the road.

Compensation data might still provide valid data on the rate of work-related death of workers if the experience of employees (who are theoretically covered by the compensation system) closely mirrored that of workers not covered by the compensation system. A detailed consideration of this question is not conducted here.

The effect of employment status was much as expected. The coverage of working deaths by OHS agencies did not appear to be related to whether the person was an employee or self-employed, except that coverage was lower for unpaid family helpers and very low for person whose employment status was in the “Other and unknown” category. The lower coverage for these workers probably arises from the fact that many of them were in the agriculture industry, where coverage was lower for all workers, or were involved in incidents whose mechanism type was generally poorly covered by OHS agencies.

The compensation agencies had reasonable coverage of employees, but not of persons deemed to be self-employed for practical purposes. In addition, some persons who are for practical purposes self-employed have arrangements that make them legally employees of their own company. When this legal definition of working arrangement was used, the differences in compensation coverage between employees (74%) and self-employed persons (2%) was even more stark. In fact, the compensation coverage of these legally self-employed persons was only more than zero because seven self-employed persons in Tasmania appeared on the Tasmanian combined OHS-compensation list, which could not be separated into coverage for OHS and compensation purposes.

The lower coverage by compensation agencies of widowed, and to a lesser extent divorced, persons probably partially reflects the fact that compensation payments are usually not made when there are no dependents. However, the majority of widowed persons were self-employed, so their lower coverage by the compensation agencies was also partly due to this factor.

The extent to which OHS and compensation agencies are mandated by law or government policy to cover the deaths considered as work-related in this thesis was considered beyond the scope of the study, and not of primary interest to the questions considered here. The focus here is to what extent these deaths are recorded and investigated by the OHS and compensation agencies (regardless of whether they “should”, by law or policy, have been investigated and recorded) and what the implications of this are.

10.10 METHODOLOGICAL LIMITATIONS

As previously mentioned, there are some limitations to the analyses presented here. These arise from the absence of data from some small compensation areas, from errors or uncertainties in the data supplied by the jurisdictions and from uncertainty about the industries and employment status of workers covered by the compensation and OHS agencies.

Firstly, not all compensation agencies contributed data to the study. Deaths of employees of Telstra for whom successful compensation claims were made are not identified in these results as being covered by a compensation agency because Telstra declined to provide the relevant data. Some merchant seaman were covered by small agencies which did not (or probably did not) contribute information to the lists supplied

by the jurisdictions for this study. Similar lack of coverage probably existed for defence force personnel and members of some specific groups, such as NSW police officers employed before 1 April 1988, who were covered by a non-NSW WorkCover scheme.

These problems are not easily dealt with because the employee coverage of most such small compensation schemes is difficult to determine. So, if the compensation analysis is to be confined to areas that should be covered by the State and Territory compensation agencies, it is not clear which industry sectors or worker groups might be considered for exclusion. In addition, exclusion of any such group from the analyses would not be appropriate because all deaths should be of interest to the OHS agency in the jurisdiction where the fatal incident occurred, regardless of compensation coverage.

Most of these small agencies (with the exception of Telstra and Australia Post) do not yet report data to the NDS, so their claims experience is not included in national compensation data sources. This means that relevant information is lost to the wider OHS community, including governments. This lack of complete information is not thought to importantly affect the results presented in this section or the conclusions made from them. For example, if persons employed in telecommunications, merchant shipping, Australia Post and the defence forces are excluded, the percentage of deaths not covered by any OHS or compensation agency becomes 31%, compared with the 34% found in the main analyses which included these groups. Similarly, the percentage not covered excluding and including these groups was similar for all OHS agencies (63% versus 65% respectively) and for all compensation agencies (41% versus 43% respectively).

Secondly, incidents that occur in one jurisdiction may be compensated by an agency from another jurisdiction (usually where the employer is based), or even by an agency without a State or Territory basis, such as Comcare Australia, Telstra or Australia Post. An extreme example of this occurred for one case, where the incident and death occurred in South Australia, the name appeared on compensation lists from Queensland and Victoria, and where the employer of the deceased was based in Western Australia. As an extension of this, it is often not possible to tell which jurisdiction would be expected to cover the compensation for a particular case, because the address for legal purposes of the employer may not be known.

Analyses presented here based on jurisdiction identified a case as being covered by a compensation agency if **any** of the compensation agencies included the name on their list. Therefore, the estimated coverage provided by each jurisdiction's compensation agency may be slightly exaggerated by the jurisdiction-specific results. Countering this, the estimated coverage information for a given jurisdiction does not include coverage by that jurisdiction of fatal incidents that occur in another jurisdiction. This should not be a major problem, as only 3% of deaths were compensated by an agency other than the compensation agency of the jurisdiction where the incident occurred (excluding Comcare Australia) (Table 10.7).

Some of the jurisdictions were unable to be certain that all claims that appeared on their list had been accepted and/or were for fatal incidents. Many of the lists also clearly included natural cause deaths. Non-accepted claims were excluded for this comparison where this was indicated on the list, but for all other records on the list it had to be assumed that the claim had been accepted. This approach may have resulted in a slight over-estimation of the extent of coverage by the compensation system. Similarly,

records that could not be found on the ABS Deaths Data List or in the coronial system were not excluded unless there was reliable information that the record related to an incident which involved a natural cause death, suicide, did not result in death or which occurred outside the study period. This conservative approach is likely to slightly overestimate the percentage of missing data. Since only 1.5% of records could not be accounted for in some definitive way, this problem is unlikely to have been of any importance (except for the Western Australian compensation information, as discussed earlier).

Finally, it should be noted that these data refer to the period 1989 to 1992 and so reflect the coverage of the OHS and compensation agencies during that period. There have been some changes in these systems since then that may modify the conclusions made on the basis of these findings. However, it is unlikely that these changes would have substantially improved the coverage of either the OHS or compensation systems. In fact, legislative changes to remove commuting deaths from coverage by compensation systems in some jurisdictions will have significantly decreased the coverage of these deaths. Individual jurisdictions should be aware of what changes have occurred in the last few years. Presumably, the effect of these changes can be taken into account when assessing the implications of this study's results for very recent OHS and compensation data.

10.11 CONCLUSIONS

There is significantly incomplete coverage of work-related deaths by government OHS and compensation agencies in Australia, with 65% of working deaths not covered by OHS agencies; 43% of working deaths were not covered by compensation agencies; and 34% of working deaths were not covered by either OHS or compensation agencies. The

coverage varied considerably by jurisdiction, and depending on the industries, occupations, mechanisms and agencies involved in the fatal incidents.

Table 10.7 Coverage of deaths by compensation agencies by jurisdiction for deaths registered in jurisdictions other than where the incident occurred (excluding ACT only). Number. Australia, 1989 to 1992

Compensation jurisdiction	Incident jurisdiction							Total
	NSW	NT ¹	QLD	SA	TAS ¹	VIC	WA	
NSW	0	0	5	1	1	8	0	15
VIC	16	2	1	6	1	0	1	27
QLD	14	0	0	1	2	0	0	17
SA	0	0	1	0	0	7	0	8
WA	0	0	0	1	1	0	0	2
TAS	0	0	1	0	0	0	0	1
Total	30	2	8	9	5	15	1	70

1: The Northern Territory and Tasmania provided a single compensation and OHS list, all of which is considered in this table.